The University of Oregon
McNair Scholars Program
presents

Works-in-Progress Symposium

September 22nd, 2020
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Symposium Program

Zoom Link
Meeting ID: 974 6848 2558 (Passcode: 791855)

9:30 - Welcome from Director

Student Presentations will be approximately 8-10 min. each with time for a question or two before the next presentation.

Emily Boyce
Jyhreh Johnson
Lukas MacMillen
Cat Luna
Alexie Malone
Emily Duru
Bailey Adams
Desi Casanova
Alyssa Fuentez
Nicole Wales

12:00 - Adjourn
Note from Program Director

We are honored to host the 2020 Ronald E. McNair Scholars Program “Works in Progress” Symposium during a truly historic moment. The McNair Scholars have persevered through the exceptional challenges caused by the pandemic since March and the catastrophic wildfires more recently. They have responded with creativity and grit, and in collaboration with their faculty and graduate student mentors have innovated strategies for continuing their undergraduate research and graduate school preparation.

The McNair Scholars have fostered a strong peer community during these “physically distanced” times, through the virtual McNair seminars and small group meetings. We look forward to ribbon-cutting our new McNair Scholars Student Lounge and Computer Lab in PLC that had just been completed when COVID-19 arrived.

We also wish to acknowledge the faculty mentors and the support networks for our McNair Scholars, and thank you for participating in our virtual Symposium. Your commitment and care is deeply appreciated and we understand that your professional and academic lives have been profoundly impacted as well.

Finally, in special recognition of Dr. Ronald E. McNair, the namesake of the national McNair Scholars Program, we have included a brief biography into our program. We also recommend viewing this notable commencement address delivered by Dr. McNair at the University of South Carolina in 1984 to learn more about his life and vision.

During the current anti-racism social justice movement the McNair Scholars Program nationally has rededicated its charge of diversifying the professoriate, and resisting and subverting historic white supremacy, settler-colonialism, and structural racism that have shaped higher education institutions in this country. The McNair Scholars students’ research and career goals outlined in this program continue to advance this work.

Kevin Hatfield, Interim PI/Program Director
Dr. Ronald E. McNair obtained his Ph.D. in lazer physics from the Massachusetts Institute of Technology in 1976, with a dissertation entitled “Energy Absorption and Vibrational Heating in Molecules Following Intense Laser Excitation.” He went on to be selected by NASA for the space shuttle program in 1978. Dr. McNair was the second African American to fly in space. He successfully flew his first mission in February 1984, but was then selected to serve aboard the ill-fated U.S. Challenger space shuttle. After his death in the Challenger accident in 1986, members of Congress provided funding for the Ronald E. McNair Post-Baccalaureate Achievement program. Their goal was to encourage low-income and first-generation college students, and students from historically underrepresented ethnic groups to expand their educational opportunities by enrolling in a Ph.D. program and ultimately pursue an academic career. This program is dedicated to the high standards of achievement inspired by Dr. McNair’s life.
Alexie Malone

**Major:** Political Science  
**Minors:** Legal Studies, Ethics, and Business Administration  
**Mentor:** Dr. Mikhail Myagkov

Her research seeks to understand human behavior in politics specifically that either motivates them to cooperate and do things to help society, or defect and act in their own best interests. This is displayed through game theory and more specifically the Prisoner’s Dilemma analogy. Both domestic and international politics are impacted by decisions made by the people with political power.

She is looking to study both international politics as well as the practice of law in graduate school.

Alyssa Fuentez

**Major:** Human Physiology  
**Mentor:** Denise Piscopo, Ph.D.

Her research aims to determine whether an environment enriched with visual, social, and physical stimuli during development effect cortical processing in primary visual cortex (V1). Vision is a vital sense required for us to understand and interact with the world around us. Conversely, it has also been demonstrated that the environment with which we interact may have a profound impact on neural development and processing.

She is looking to continue her research in Neuroscience as well as study to work in Science Education.
Bailey Adams

**Major:** Planning, Public Policy and Management  
**Minor:** Entrepreneurship  
**Mentor:** Dr. Nikki Chery

Her research seeks to understand how Black Americans perceive the police. Through this, she will also look to see if there are any trends or variations based off of demographics such as gender, Income, or political affiliation. Due to the recent killings of George Floyd and Breonna Taylor by police and many other countless lives, it has left an unanswered question of how these events have affected Black Americans perceptions of the police.

She is looking to pursue a specialist degree in School Psychology with the hopes of working at either an elementary or high school.

Cat Luna

**Major:** Psychology  
**Minors:** Planning, Public Policy, and Management & Nonprofit Administration  
**Mentors:** Maria Kalnbach & Bob Choquette

Her research focuses on how nontraditional students with children experience higher levels of daily stress when managing a weekly schedule compared to other students during COVID-19.

She aspires to be in a position to do research in Prevention Science using her Psychology major while influencing the implementation of mental health education programs using her PPPM and Nonprofit Admin minors in the future. She will be applying to the Prevention Science program at the University of Oregon this year.
Desi Casanova

**Major:** Psychology  
**Minor:** Disability Studies  
**Mentor:** Dr. Ruth Ellingsen & Dr. Sarah Dubrow

Her research evaluates individuals’ own perception of their memory recall skills after having suffered from drug addiction in their adolescence. She wants to discover if there are long term consequences of adolescent drug abuse carrying into adulthood even after the drug abuse has ended. Utilizing memory recall as the starting point will give future researchers the ability to begin investigating other areas of cognitive ability in recovering addicts.

She is looking to be accepted into the Oregon Health and Sciences University in Portland to begin her Doctorate in Clinical Psychology. Through this program she hopes to be able to specialize in psychopathology, addiction studies, and neurological disabilities.

Emily Boyce

**Major:** Biochemistry  
**Mentor:** Dr. Alice Barkan

Her research examines the effects of light on psbA translation and initiation of the PSII D1 damage repair cycle.

She is looking to continue studying Biochemistry in either a master’s or Ph.D. program.
Emily Duru

**Major:** English  
**Minor:** Creative Writing  
**Mentor:** Dr. Courtney Thorsson

Her research looks at how the portrayal of Black women in contemporary American literature perpetuates antiquated ideas surrounding Black womanhood, specifically by looking at texts by Paule Marshall and how her stories undo that narrative and accurately portray what many Black girls’ coming-of-age stories resemble in this country using Black feminist theory and the lens of intersectionality.

She is looking to continue her research in English Literature with a focus in Black Studies in at least a master’s program.

Jyhreh Johnson

**Majors:** Biological Anthropology & Linguistics  
**Minor:** African Studies  
**Mentor:** Dr. Stephen Frost

Her research examines cranial shape change in adults. Present research on forensic cranial aging techniques along with cranial growth and development have primarily focused on changes from the prenatal stage to the adult stage of life. Thus, leaving research examining cranial change after attaining adulthood limited. The proposed research will address the following questions; Are there quantifiable patterns of shape change that correlate to aging? If so how does the research assist in cranial age estimation techniques? What do these changes tell us about human ontogeny?

She is looking to enroll in a PhD. program in Anthropology primarily focusing on skeletal morphology, paleoanthropology and human growth and development.
Lukas MacMillen

**Major:** Biology *(emphasis in molecular, cellular, & developmental)*  
**Mentor:** Dr. Nadia D. Signh

His research clarifies the interactions between environmental cues and recombination. More specifically, recombination has been shown to respond plastically towards a plethora of environmental cues; however, many of said cues have been rashly termed ‘stressors.’ His lab’s work distinguishes the methods necessary to correctly define condition-dependent recombination, wherein, some environmental cue acts as a stressor by directly impacting organismal fitness.

He is looking to enroll in Ph.D. programs centered around molecular, cellular, and developmental biology. His research interests include: the exo- and endogenous agents dictating development and cell communication; neurogenetic mechanisms and the process of synaptogenesis; and of course, the interactions between environmental cues and recombination.

Nicole Wales

**Majors:** Physics & Chemistry  
**Mentor:** Dr. Eric Corwin

Her research uniformly explores the jamming energy landscape of simulated, athermal glass particle systems in 3 dimensions to determine all possible minima. She is interested in understanding if this prediction holds true in 3 dimensions or if differences between minima in low dimensions are controlled by localized movements, in which only a fraction of the system particles move between the associated configurations of neighboring energy wells.

She is looking to enter a Ph.D. program in Physics to focus on either condensed matter or high-energy physics.